

ISOLA 3

23.02.24_rev.00



KE
ENJOY THE OUTDOORS





PLUS PRODUCT



SCREWS

Hidden and included Screws and fasteners into the design



ARCHED ROOF

the arched shaped roof allows minimum height overall dimensions and enhances the structure design



The integrated LED spotlights ensure an illumination with reflected light: external, internal



MODULAR SYSTEM

infinite number of modules can be installed side by side



CLOSURE

Possibility of side closures with vertical drop down screens, sliding glass doors and draped curtains



AUTOMATION

wind, rain and temperature sensors, together with cutting-edge automation

ISOLA 3



↔ 550 ↻ 1000



↔ 180 ↻ 100

Aluminium shade structure with folding retractable awning.

The curtain, which is stretched at maximum opening, is fixed on arched crossbars and slides horizontally by means of trolleys on guides thanks to the insertion of tubular motors.

The maximum dimensions allowed are 550x1000 with 300 cm. high pillars. 55 mq coverage area for single module.

The profiles are made of EN AW-6060 extruded aluminium alloy (with 16 x 23 cm guides and 16 x 16 cm columns).

Each module is motorised separately.

Freestanding or wall-mounted versions are available with steel brackets and screws.

The painting of the interested parties is carried out with epoxy powders based on polyester resin.

The standard colors are RAL 9010 White, RAL 1013 Off-white, RAL 7016 Iron, rough Carbon and rough Corten.

Opatex Flat are the fabrics available as standard.

Among the options shown, there are others available as displayed in the samples. Possibility of both internal lighting on calendered arches and perimeter, and external lighting on the girder, through the installation of LED strips.

Moreover, it is foreseen the insertion of light sensors, rain sensors and anemometers with the possibility of remote management through connection devices that make it integrable with the home automation of the house.

Wind resistance guaranteed up to class 6 (EN 13561:2015).

Wind resistance guaranteed up to class 6 (EN 13561:2015).

Wind-resistant up to Class 6 (EN 13561:2015).

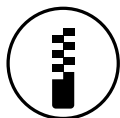
Product certified with CE marking according to EN 13561:2015

OPTIONAL

LIGHT



VERTIKA

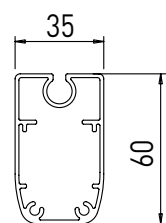
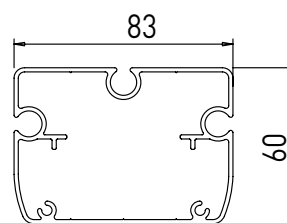
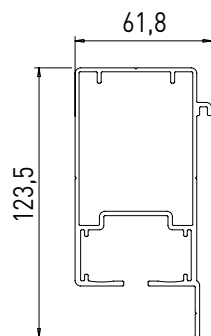
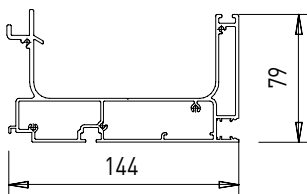
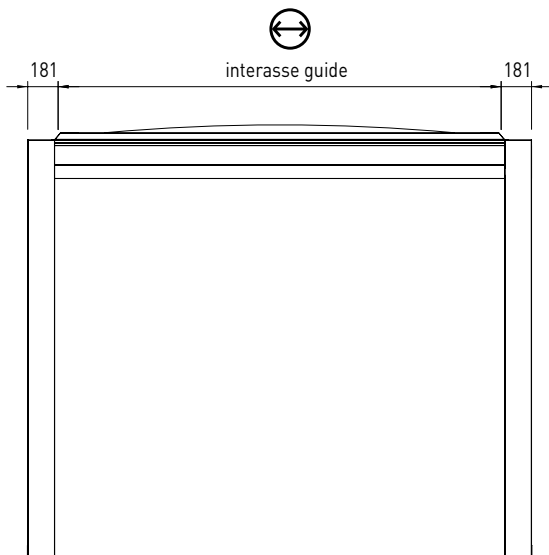
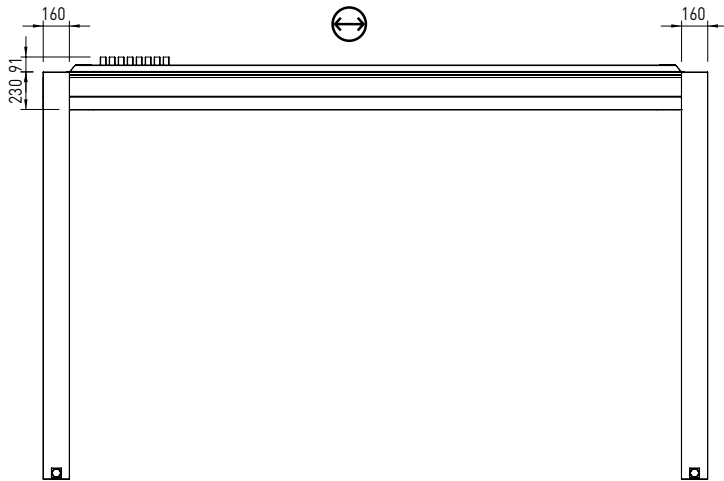


GLASS DOORS



TECHNICAL INFORMATION

General technical plan

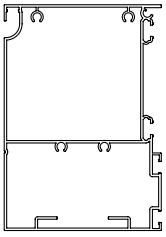


TECHNICAL INFORMATION

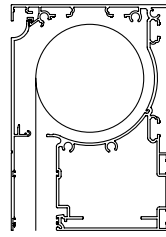
A standard

B optional

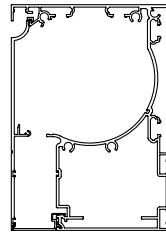
C optional



A standard

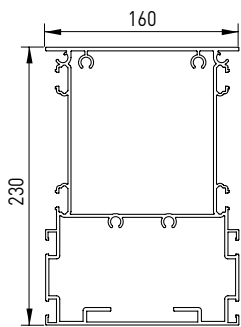


B optional



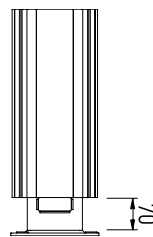
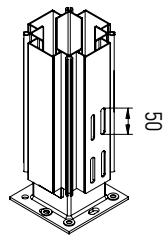
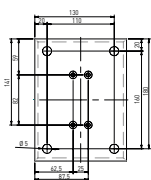
C optional

Connecting beam

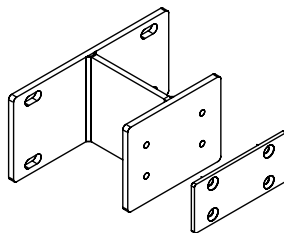
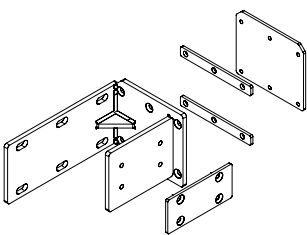


Connecting beam

Ground connection



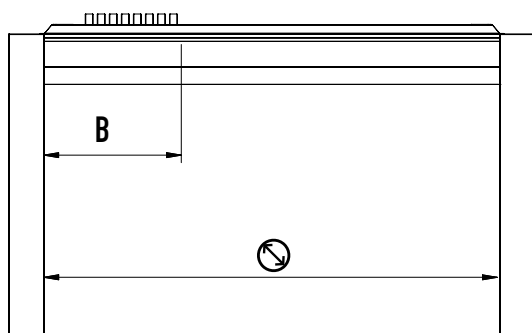
Wall installation



Central reinforcement
bracket for L → 275


TECHNICAL INFORMATION

Cloth dimensions



Indicative values of the fabric encumbrance and the number of the fabric carrying crossbar profiles.

Traverse movement

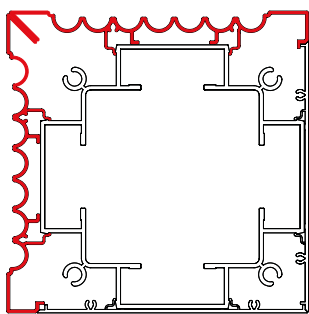
	B cm	N
250	65	7
300	70	8
350	76	9
400	82	10
450	94	12
750	136	13
500	100	14
800	142	15
550	106	17
850	154	18
600	112	19
900	160	20
650	124	22
950	166	23
700	130	24
1000	172	25

Crossbar profile numbers (terminals included). Maximum interaxis fabric carrying cross bar profiles measure cm 40.

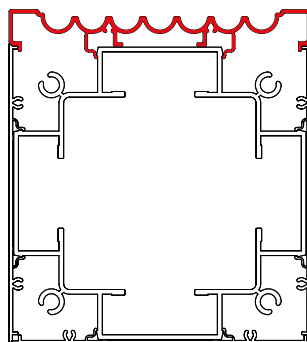
ISOLA 3 CLASSIC



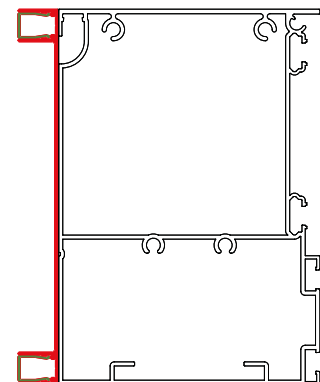
Isola 3 in the Classic version features elegant workmanship in the outer profiles and the outer sides of the columns. In this version there is no possibility of installing LEDs in the outer profiles.



Corner column



Central column



Perimeter beam



WIND RESISTANCE

The wind resistance of an exterior shade system is characterized by its ability to support defined loads by simulating wind with positive or negative pressure. In order to define a correlation between the wind resistance class according to the classes defined by the technical standard EN 13561 and the wind speed expressed in Km / h, a comparative table with the Beaufort scale is used. The Beaufort Scale classifies winds according to the speed at which they blow. Wind speed is measured in kilometers per hour (km / h) or in nodes using a measuring instrument, called anemometer, at a height of about 10 meters above the ground.

	TERMINE DESCRITTIVO	VELOCITA' VENTO km/h	VELOCITA' VENTO km/h	VELOCITA' VENTO Nodi	EFFETTI DEL VENTO SULLA TERRA	EN 13561
4	Vento moderato	5,5 - 7,9	20 - 28	11 - 16	Si sollevano polvere e pezzi di carta; si muovono i rami piccoli degli alberi.	Classe 1
5	Vento teso	8,0 - 10,7	29 - 38	17 - 21	Gli arbusti con foglie iniziano a ondeggiare; le acque interne s'increspano.	Classe 2
6	Vento fresco	10,8 - 13,8	39 - 49	22 - 27	Si muovono anche i rami grossi; gli ombrelli si usano con difficoltà.	Classe 3
7	Vento forte	13,9 - 17,1	50 - 61	28 - 33	Gli alberi iniziano a ondeggiare; si cammina con difficoltà contro vento.	Classe 4
8	Burrasca	17,2 - 20,7	62 - 74	34 - 40	Si staccano rami dagli alberi; generalmente è impossibile camminare contro vento.	Classe 5
9	Burrasca forte	20,8 - 24,4	75 - 88	41-47	Possono verificarsi leggeri danni strutturali agli edifici (caduta di tegole o di coperchi dei camini).	Classe 6

Please note: in wind above the maximum class rating, it is necessary to retract the fabric or move blades to upright. For the evaluation of wind resistance of the perimeter closures (Vertika, Vertika Prime, Line glass) refer to the performance declarations of the products themselves. The opening and closing of the screens can be controlled by installing sensors (sun, wind, rain). These aids do not replace the need for visual monitoring and taking manual action to make the awning safe when winds or loads exceed the product's limits. Therefore, the safety of the product is not guaranteed by the use of sensors.

1 L

cm	250	300	350	400	450	500	550
250	9	8	8	8	7	7	7
300	9	8	8	8	7	7	7
350	9	8	8	8	7	7	7
400	9	8	8	8	7	7	7
450	9	8	8	8	7	7	7
500	9	8	8	8	7	7	7
550	9	8	8	8	7	7	7
600	9	8	8	8	7	7	7
650	9	8	8	8	7	7	7
700	9	8	8	8	7	7	7
750	9	8	8	8	7	7	7
800	9	8	8	8	7	7	7
850	9	8	8	8	7	7	7
900	9	8	8	8	7	7	7
950	9	8	8	8	7	7	7
1000	9	8	8	8	7	7	7

2 L

cm ↻	500	600	700	800	900	1000	1100
250	9	8	8	8	7	7	7
300	9	8	8	8	7	7	7
350	9	8	8	8	7	7	7
400	9	8	8	8	7	7	7
450	9	8	8	8	7	7	7
500	9	8	8	8	7	7	7
550	9	8	8	8	7	7	7
600	9	8	8	8	7	7	7
650	9	8	8	8	7	7	7
700	9	8	8	8	7	7	7
750	9	8	8	8	7	7	7
800	9	8	8	8	7	7	7
850	9	8	8	8	7	7	7
900	9	8	8	8	7	7	7
950	9	8	8	8	7	7	7
1000	9	8	8	8	7	7	7

2 P

cm ↻	250	300	350	400	450	500	550
500	9	8	8	8	7	7	7
600	9	8	8	8	7	7	7
700	9	8	8	8	7	7	7
800	9	8	8	8	7	7	7
900	9	8	8	8	7	7	7
1000	9	8	8	8	7	7	7
1100	9	8	8	8	7	7	7
1200	9	8	8	8	7	7	7
1300	9	8	8	8	7	7	7
1400	9	8	8	8	7	7	7
1500	9	8	8	8	7	7	7
1600	9	8	8	8	7	7	7
1700	9	8	8	8	7	7	7
1800	9	8	8	8	7	7	7
1900	9	8	8	8	7	7	7
2000	9	8	8	8	7	7	7

3 L

cm ↻	750	900	1050	1200	1350	1500	1650
250	9	8	8	8	7	7	7
300	9	8	8	8	7	7	7
350	9	8	8	8	7	7	7
400	9	8	8	8	7	7	7
450	9	8	8	8	7	7	7
500	9	8	8	8	7	7	7
550	9	8	8	8	7	7	7
600	9	8	8	8	7	7	7
650	9	8	8	8	7	7	7
700	9	8	8	8	7	7	7
750	9	8	8	8	7	7	7
800	9	8	8	8	7	7	7
850	9	8	8	8	7	7	7
900	9	8	8	8	7	7	7
950	9	8	8	8	7	7	7
1000	9	8	8	8	7	7	7

3 P

cm ↻	750	900	1050	1200	1350	1500	1650
750	9	8	8	8	7	7	7
900	9	8	8	8	7	7	7
1050	9	8	8	8	7	7	7
1200	9	8	8	8	7	7	7
1350	9	8	8	8	7	7	7
1500	9	8	8	8	7	7	7
1650	9	8	8	8	7	7	7
1800	9	8	8	8	7	7	7
1950	9	8	8	8	7	7	7
2100	9	8	8	8	7	7	7
2250	9	8	8	8	7	7	7
2400	9	8	8	8	7	7	7
2550	9	8	8	8	7	7	7
2700	9	8	8	8	7	7	7
2850	9	8	8	8	7	7	7
3000	9	8	8	8	7	7	7

4

cm ↻	500	600	700	800	900	1000	1100
500	9	8	8	8	7	7	7
600	9	8	8	8	7	7	7
700	9	8	8	8	7	7	7
800	9	8	8	8	7	7	7
900	9	8	8	8	7	7	7
1000	9	8	8	8	7	7	7
1100	9	8	8	8	7	7	7
1200	9	8	8	8	7	7	7
1300	9	8	8	8	7	7	7
1400	9	8	8	8	7	7	7
1500	9	8	8	8	7	7	7
1600	9	8	8	8	7	7	7
1700	9	8	8	8	7	7	7
1800	9	8	8	8	7	7	7
1900	9	8	8	8	7	7	7
2000	9	8	8	8	7	7	7

6 L

cm ↻	750	900	1050	1200	1350	1500	1650
500	9	8	8	8	7	7	7
600	9	8	8	8	7	7	7
700	9	8	8	8	7	7	7
800	9	8	8	8	7	7	7
900	9	8	8	8	7	7	7
1000	9	8	8	8	7	7	7
1100	9	8	8	8	7	7	7
1200	9	8	8	8	7	7	7
1300	9	8	8	8	7	7	7
1400	9	8	8	8	7	7	7
1500	9	8	8	8	7	7	7
1600	9	8	8	8	7	7	7
1700	9	8	8	8	7	7	7
1800	9	8	8	8	7	7	7
1900	9	8	8	8	7	7	7
2000	9	8	8	8	7	7	7

2 SC

cm ↺	500	600	700
↻ 250	9	8	8
300	9	8	8
350	9	8	8
400	9	8	8
450	9	8	8
500	9	8	8
550	9	8	8
600	9	8	8
650	9	8	8
700	9	8	8



The KE painting process includes high quality standards, with an 8-stage pre-treatment that includes degreasing, deoxidation, and protective treatments before painting. Thanks to this last phase, components and profiles are further guaranteed against particularly severe environmental situations. At the end of the process the profiles and components are painted with polyester resin-based epoxy powders.

Treated components are periodically tested in salt spray according to the ISO 9227 standard to confirm conformity and consistency of the process.

The European product standard EN 13561: 2015 defines corrosion resistance classes of the metal parts that make up the product according to the table below.

Tests performed on the painted components and profiles allow us to classify the product in the maximum class achievable according to EN 13561: 2015, C2 / 4 (48 h - internal components, 240 h - external components).

Equipped with the most modern process control systems including continuous monitoring in which the working parameters are recorded and corrected every 2 minutes, the new painting process guarantees the high quality characteristics of the product while minimizing the risk of environmental pollution.

This is a choice born from the desire to always keep up with technology while guaranteeing operator safety and low environmental impact.

Thanks to nanotechnologies, the implemented coating constitutes an excellent base for anchoring paints, ensuring excellent adhesion and resisting corrosion.

The plant in which aluminum or galvanized steel products with a length of up to 7 meters can be treated, includes 7 treatment tanks, 1 double compartment drying oven, 1 polymerization oven and 1 purification plant for waste water treatment.

The real focus of the plant, however, is the two powder coating booths, each with 4 stations for manual retouching. The booths allow greater production continuity, thanks to a drastic reduction in required stops for color changes.

CORROSION RESISTANCE

Classes	1	2	3	4
Internal components	24	48		
External components		48	96	240

COLOURS



When working with color, we know that our whole world is defined by light. And color is nothing more than a breakdown of light. Objects reflect back to our eyes only the color that defines it. This is why it is so important to recognize the close link between color and matter. For this project, there are three keywords that guide the research: Words, Places, Matters.

WORDS: Naming colors is important to make them familiar and easily recognizable.

PLACES: Places define colors. Recognizing different types of places is a starting point for defining and suggesting color combinations.

MATERIALS: Objects do not exist in isolation, but rather match the environment around them: analyzing the materials that make up the environment itself helps us to make decisions; to decide, for example, if the character of a place is false or if instead it is genuinely artistic.

COLOURS RAL



● Ral standard (without supplement)



There is increasing demand for high-performance buildings that have a very low energy consumption and use energy derived from renewable sources. In particular, the limitation of solar heat gain is one of the most important aspects of summer thermal comfort. Solar shading plays an essential role in this concept. The gtot value determines the ability of the solar shield to maintain, in an environment directly exposed to solar radiation, a more comfortable temperature than that which would occur with the presence of glass alone. The solar heat gains are directly proportional to the total transmittance of solar energy gtot, a value that depends on the glazing and external shielding. The European product standard EN 13561: 2015 and the EN 14501 standard identify 5 energy performance classes as shown in the table below.

Effect of GTOT on thermal comfort					
Gtot value	$\geq 0,50$	$\geq 0,35 \text{ e } < 0,50$	$\geq 0,15 \text{ e } < 0,35$	$\geq 0,10 \text{ e } < 0,15$	$< 0,10$
Class	0	1	2	3	4
	very mild effect	Mild effect	Moderate effect	good effect	very good effect

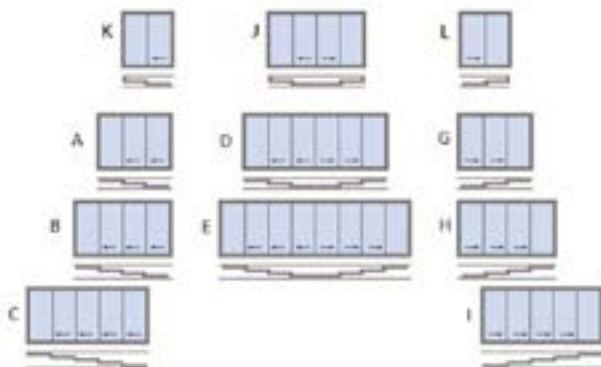
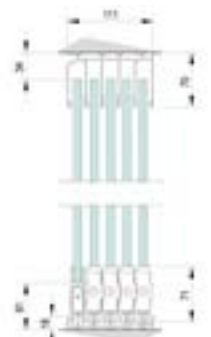
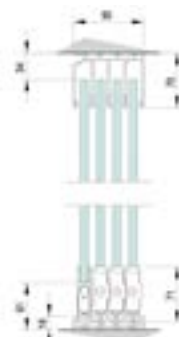
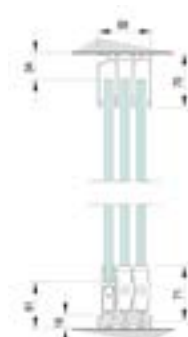
Each KE product has a Gtot value according to the shading fabric / profiles used. For details, refer to the information provided with the technical data sheet of the fabric and the CE label.

OPTIONAL_LINE GLASS



Sliding windows with frameless doors. Lower track only 18 mm high. Easy installation with left or right hand opening. Side or central closure. Packaging with aligned windows. Height adjustment up to 8 mm for each single door. Removable for easy cleaning. Closure with self-locking and / or lock. Waterproofing is not guaranteed during heavy rain or rain with wind.

Technical Details





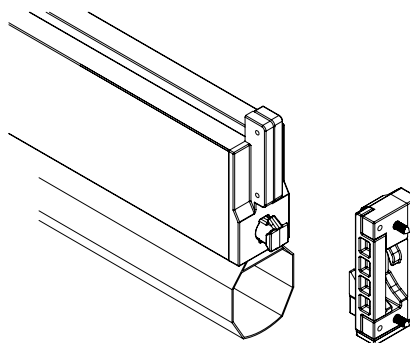
Vertika is a vertical closure that provides protection from sun and rain. It can be equipped with WIND BLOCK, a locking tensioning system for the fabric. With Vertika you can use blackout and filtering fabrics to better manage solar radiation.

- AVAILABLE:

PRIME GPZ I
110 GPR
110 GPZ
130 GPR
130 GPZ

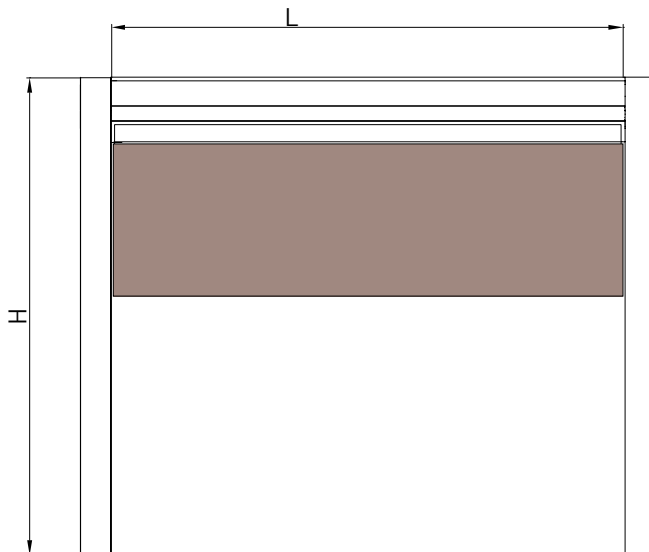
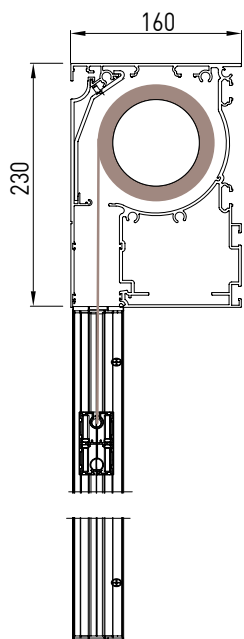


Technical Details

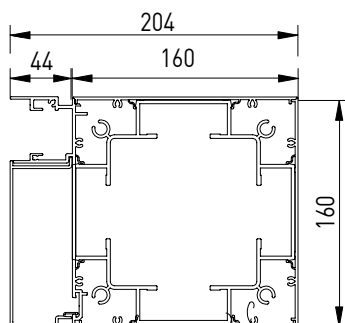
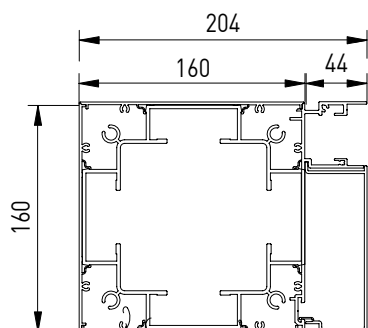


WIND BLOCK: Front bar Interlock device to be used on 100 and 130 Screeny GPZ guide, GPZ I and Gpz Unica. In wind, front bar stays locked in the low position and fabric is steadily tightened when the awning is opened completely.

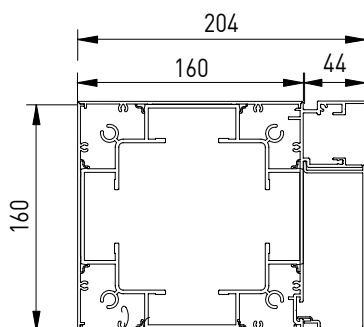
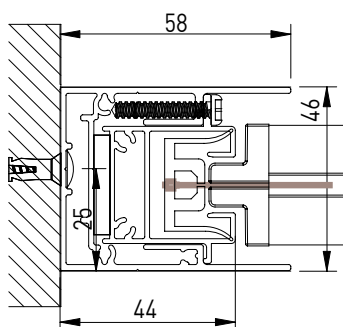
VERTIKA_PRIME GPZ I



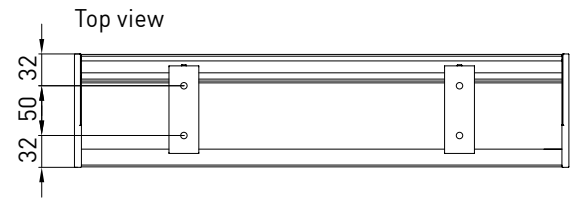
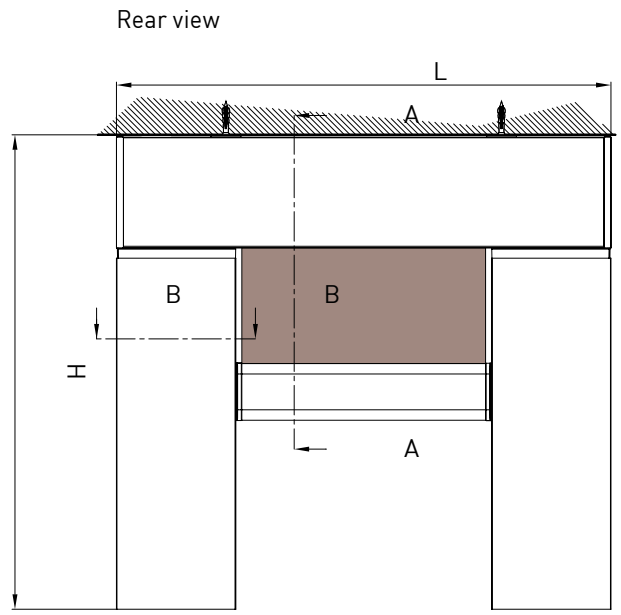
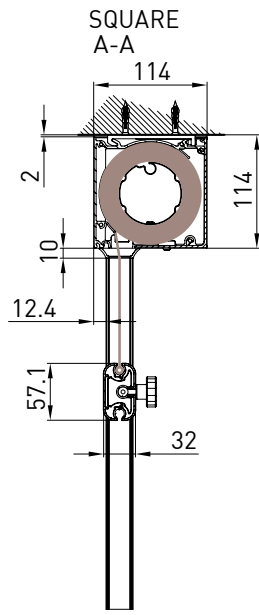
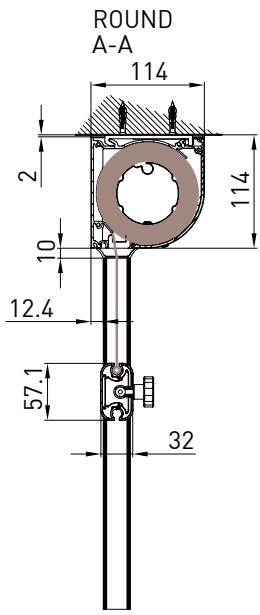
Guide on pillar



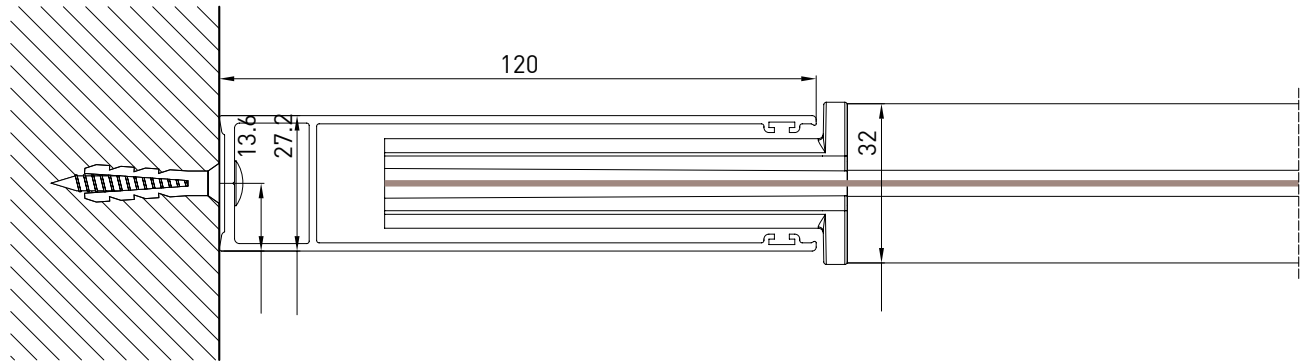
Guide on pillar/wall



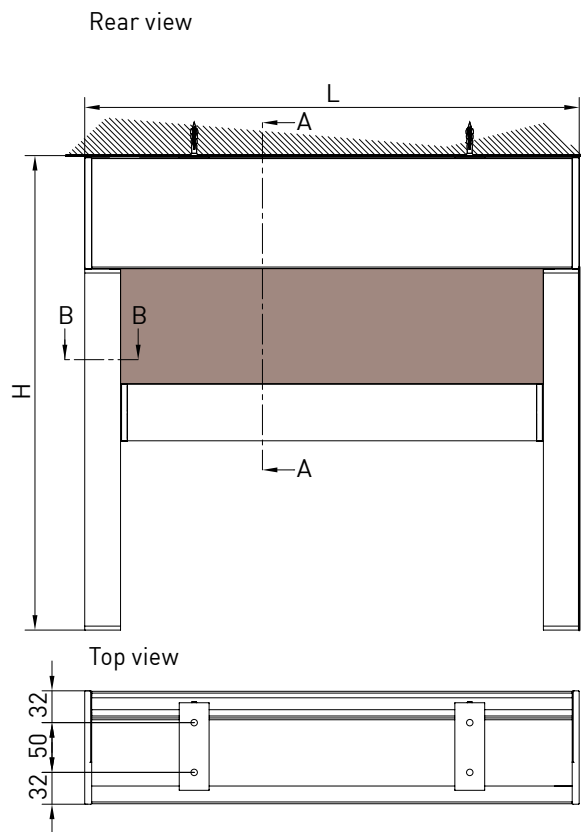
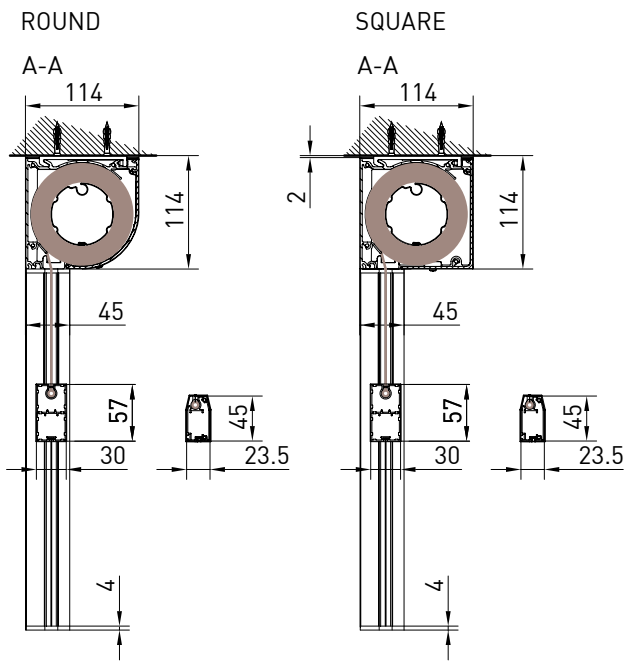
VERTIKA_110 GPR



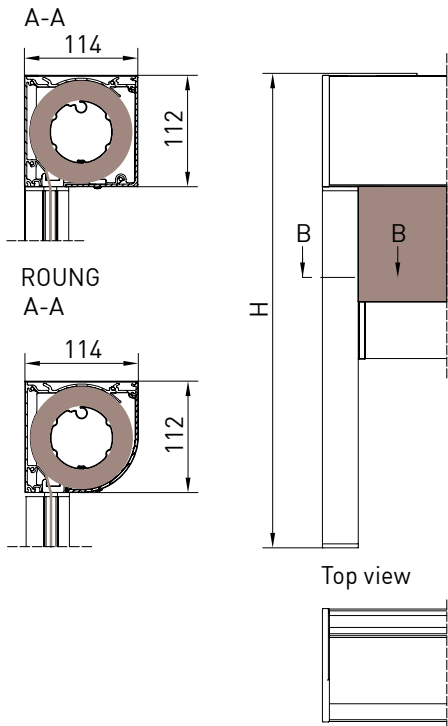
Niche guide
B-B



VERTIKA_110 GPZ

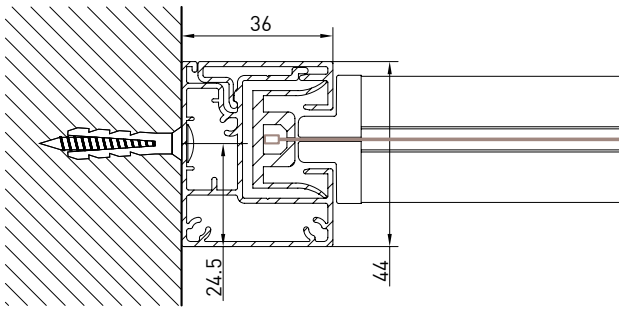


FREESTANDING - SQUARE



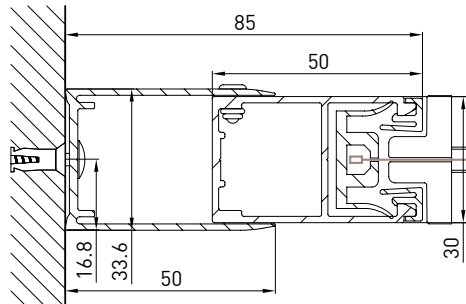
VERTIKA_110 GPZ

Niche guide
B-B

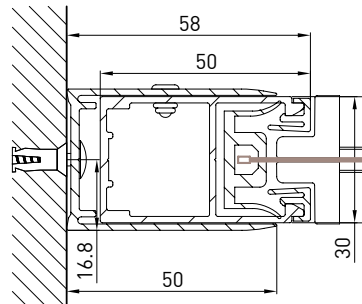


GPZ C

Niche guide
B-B

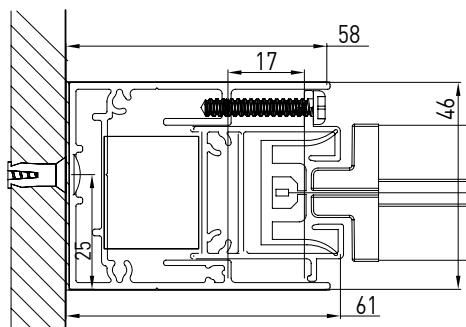


Niche guide
B-B

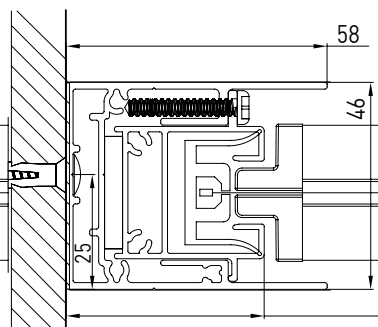


GPZ I

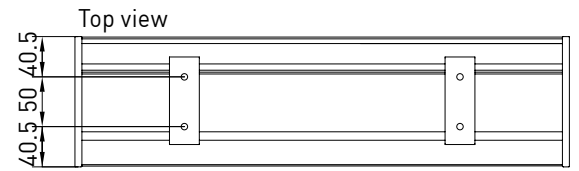
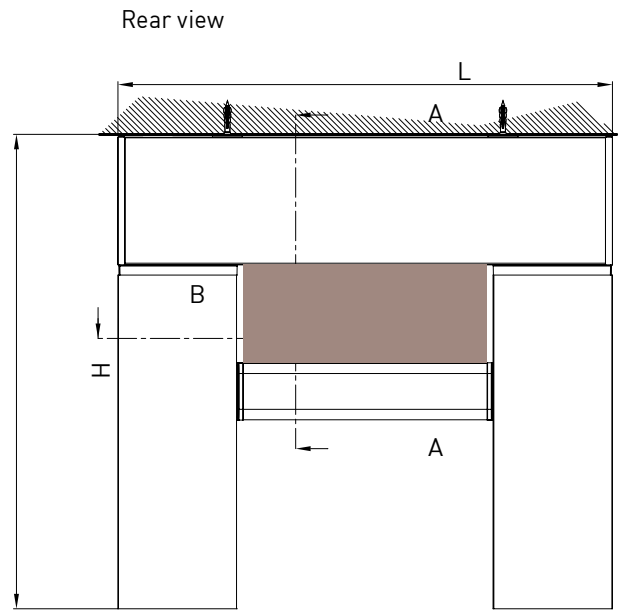
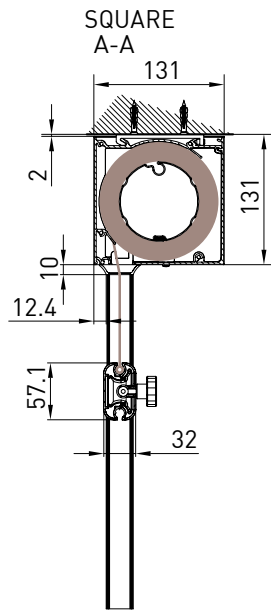
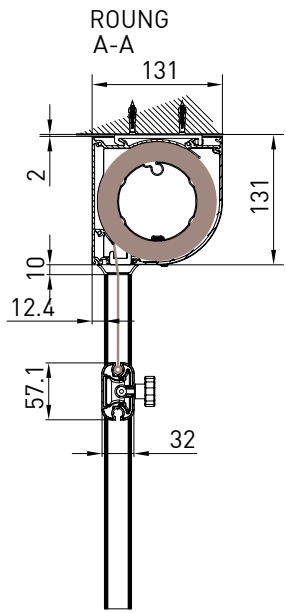
Niche guide
B-B



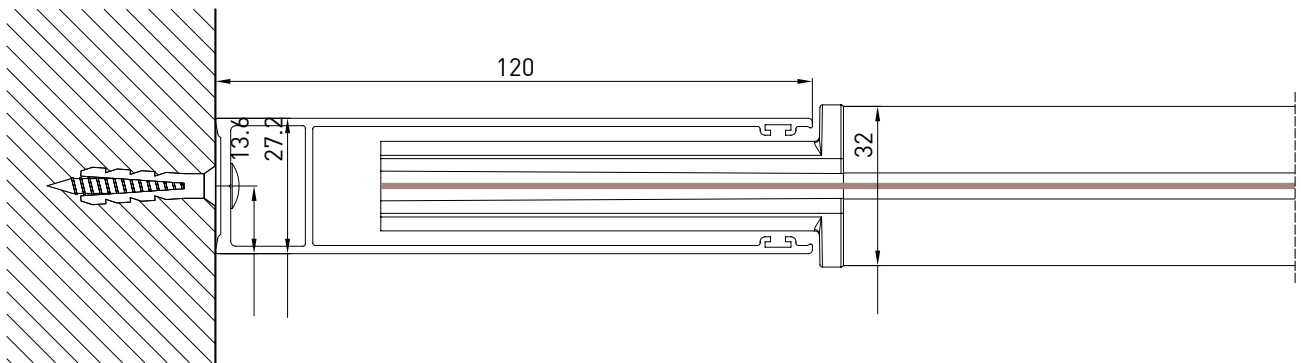
Niche guide
B-B



VERTIKA_130 GPR

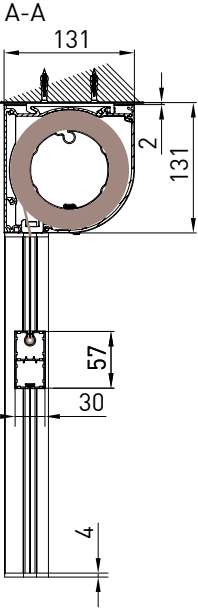


Niche guide
B-B

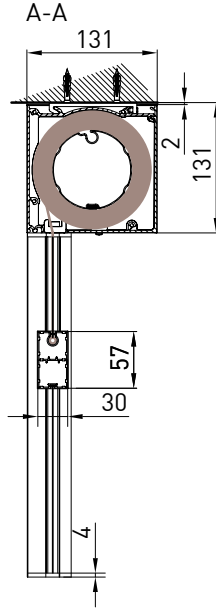


VERTIKA_130 GPZ

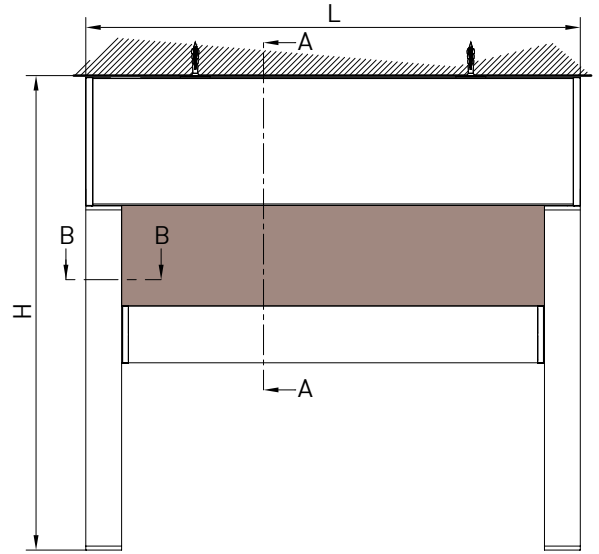
ROUNG



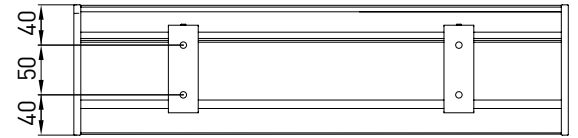
SQUARE



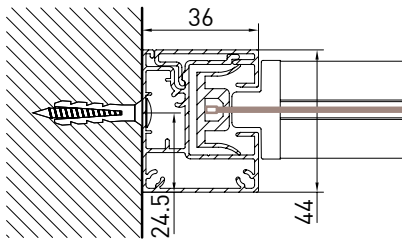
Rear view



Top view

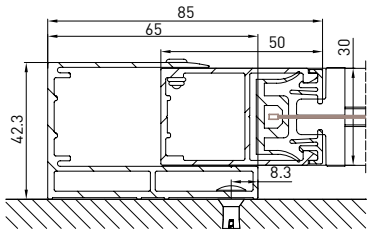


Niche guide
B-B

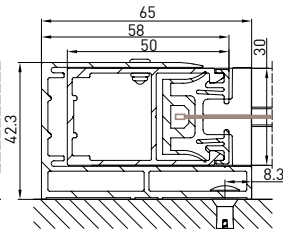


GPZ C

Wall guide (GCP)
B-B

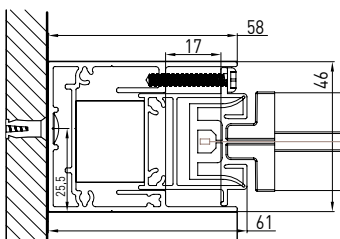


Wall guide (GCP)
B-B

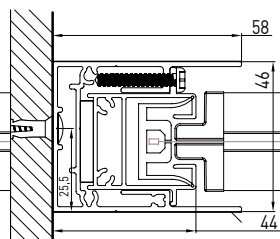


VERSIONE GPZ I

Niche guide
B-B



Niche guide
B-B





The doors have been designed to provide protection from water and wind. They are made from extruded aluminum alloy profiles (EN-AW 6060-T6) and 4 + 4 pvd 0.76 safety and shatterproof laminated glass in accordance with UNI 7697 2014. Doors are available in either one or two door versions.

The interior of the structure can be enhanced with decorative curtains. That extra romantic touch which will surely be appreciated by anyone looking for a little privacy or who want "a room all to themselves".

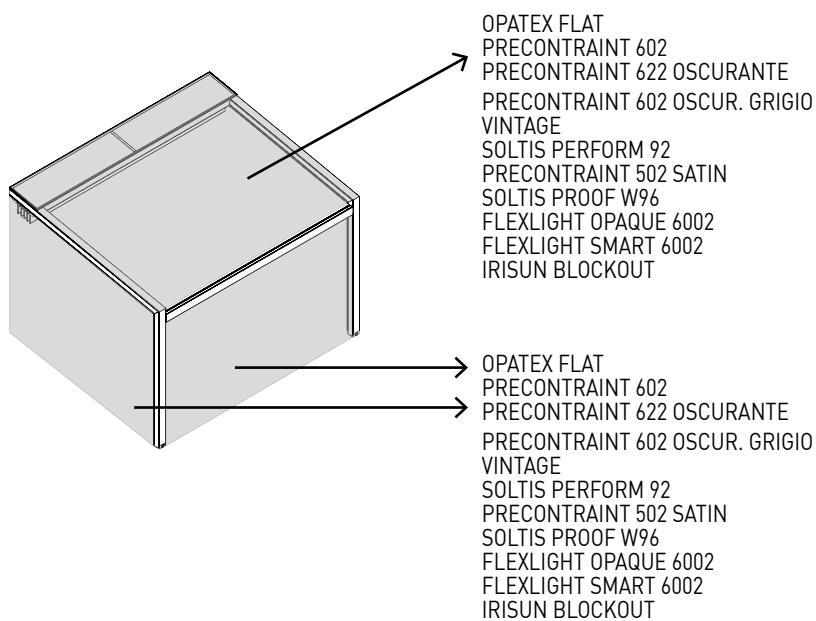
FABRICS



KE
ENJOY THE OUTDOORS

Thermal comfort blends perfectly with beautiful style thanks to the more than 500 high performance fabrics available. A wide variety of colors, styles and solar shading factors allow for a system that meets your specific needs. All fabrics are CE Certified according to the EN 13561 and EN 14501 technical standards.

N.B.
See the Fabric Guide for further fabric specifications.



Standard

- OPATEX FLAT
PRECONTRAIT 602
PRECONTRAIT 622 OSCURANTE

Optional

- PRECONTRAIT 602 OSCUR. GRIGIO
VINTAGE
SOLTIS PERFORM 92
PRECONTRAIT 502 SATIN
SOLTIS PROOF W96
FLEXLIGHT OPAQUE 6002
FLEXLIGHT SMART 6002
IRISUN BLOCKOUT

DICHIARAZIONE DI PRESTAZIONE

00003-CPR-2023-02-15

Al sensi dell'Allegato III del Regolamento (UE) n.305/2011 del 9 marzo 2011
 modificato dal Regolamento Delegato (UE) n.574/2014 del 21 febbraio 2014

Codice di identificazione del prodotto: SAKI

Uso previsto del prodotto: Impiego esterno in edifici e altre costruzioni

Nome e indirizzo del fabbricante: KE PROTEZIONI SOLARI S.r.l., Via Calnova 160/a, Noventa di Piave (VE) – Italia

Sistema di valutazione e verifica della costanza di prestazione: 4

Classificazione secondo Prospetto 1 - §4.1 EN 13561:2015:

Classi di resistenza al vento	0	1	2	3	4	5	6
Pressione di sicurezza del vento p_s (N/m ²)	<48	48	84	132	204	324	480
Velocità massima del vento (km/h)	<25	25	35	45	55	70	90

Prestazione dichiarata:

		Resistenza ai carichi da vento			
		Larghezza (cm)			
		250	300	350	400
Sporgenza (cm)	250	6	6	6	6
	300	6	6	6	6
	350	6	6	6	6
	400	6	6	6	6

Trasmittanza totale di energia solare g_{tot} : fare riferimento al valore riportato in etichetta CE in base al tipo di tessuto utilizzato. La fornitura dei prodotti sopra indicati è conforme all'insieme delle prestazioni dichiarate.

Si rilascia la presente dichiarazione di prestazione in conformità al regolamento (UE) n.305/2011 sotto la responsabilità esclusiva del fabbricante sopra identificato.



EN 13561:2015

Noventa di Piave, 15 Febbraio 2023

KE PROTEZIONI SOLARI S.r.l.
 Simone Malton
 Amministratore delegato



Lighting plays a very important role in allowing our pergolas to be used at any time of day. KE uses LED lights, perfectly integrated into the profiles of the structures. LED technology allows for low energy consumption, multiple applications and changes to light color and intensity using a simple remote control.

N.B.
See the Fabric Guide for further fabric specifications.



DATI_TECNICI:

STRIP LED	
Watt	10W
volt	24V
flow	830lm
Color temperature	3400 K
LED/m	98 led/m



EN ISO 9001

KE has adopted a Quality Management System compliant with EN ISO 9001 requirements in order to maintain and increase quality and meet the highest customer expectations. This continuous improvement, through the control of all processes and careful evaluation of risks and opportunities, engages the entire organization in the development of systems to ensure the safety and reliability of the product and in the search for innovative solutions and technologies.

OHSAS 18001

KE has activated a Safety Management System as an integral part of its work organization, committing itself to organizing the entire structure in order to pursue the objectives of continuous improvement in terms of safety and health protection. Training, knowledge and compliance with current legislation on health and safety at work, cooperation and collaboration and preventive activities are actively pursued in order to minimize the possibility of non-compliance.

EN ISO 14001

KE is ISO 14001 certified for environmental management and strives to be an example of respect for environmental resources and for the continuous improvement of its environmental management system. It is committed to continuous improvement and pollution prevention in compliance with applicable laws, regulations and standards; systematically detects any environmental impact of manufacturing processes, promotes the culture of recovery and recycling in the company and in the related production chain.

CE MARK _ EN 13561

The CE marking of outdoor awnings is a signal to the Consumer that the product can be sold freely in the EU single market, as it complies with Community provisions which recognize safety as the priority of every product that has this agreed upon reference standard. Verification of wind resistance capacity and the clear indication of the ability of the awning to contribute to the energy savings of the building (Gtot), are some of the commitments that the manufacturer makes to a product that has earned the CE marking. The name of the manufacturer, the reference standard (in our case EN 13561) accompany a product that is properly adapted to European indications.

CE MARK _ EN 1090-1

KE extended the CE marking in 2015 to stationary awnings, which are among the aluminum structural components covered by the international standard EN 1090-1. This marking reflects our use of rigorous structural design and manufacturing with qualified processes, adequate industrial resources and qualified personnel.

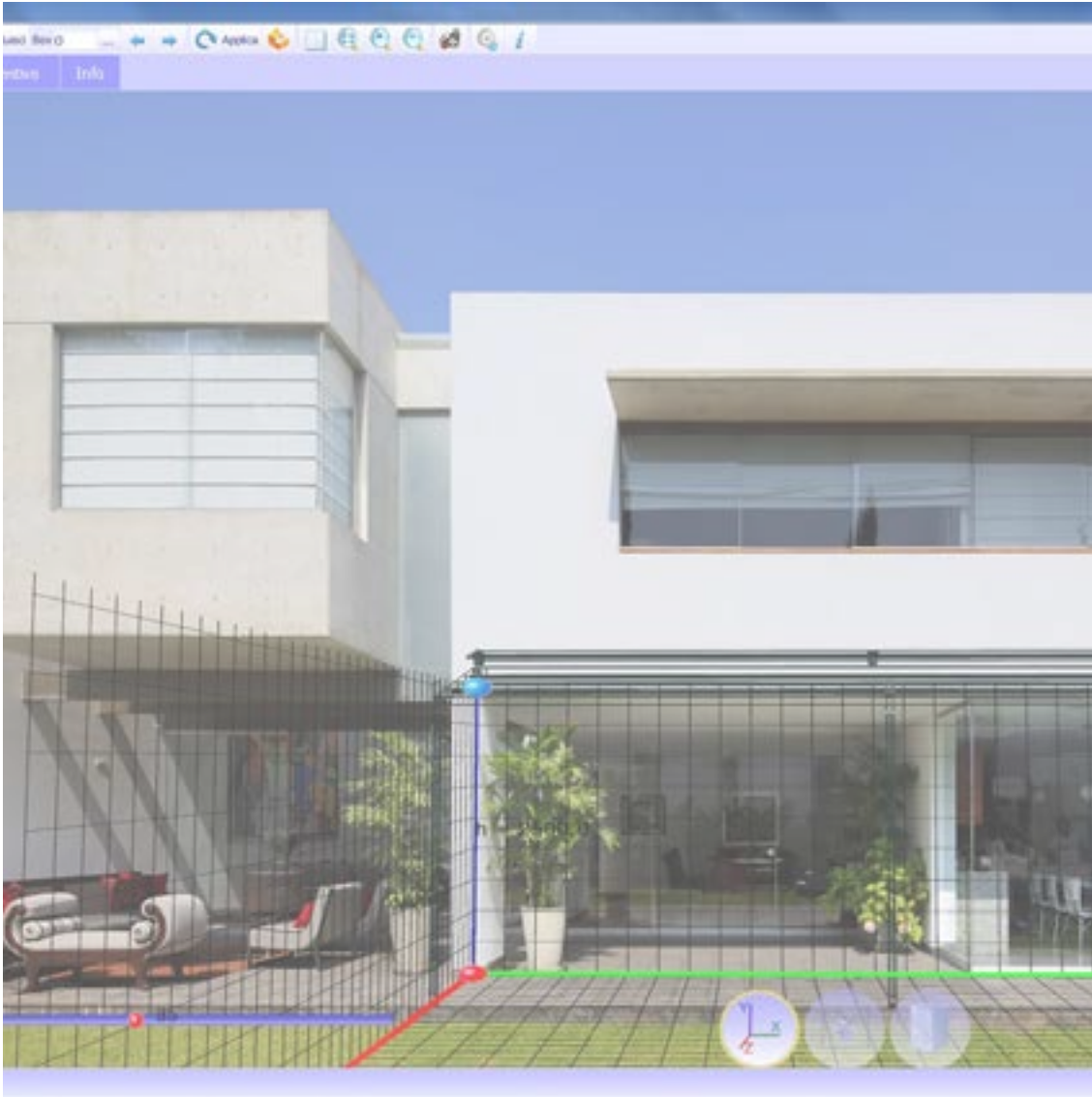
VIRTUAL SHOW ROOM



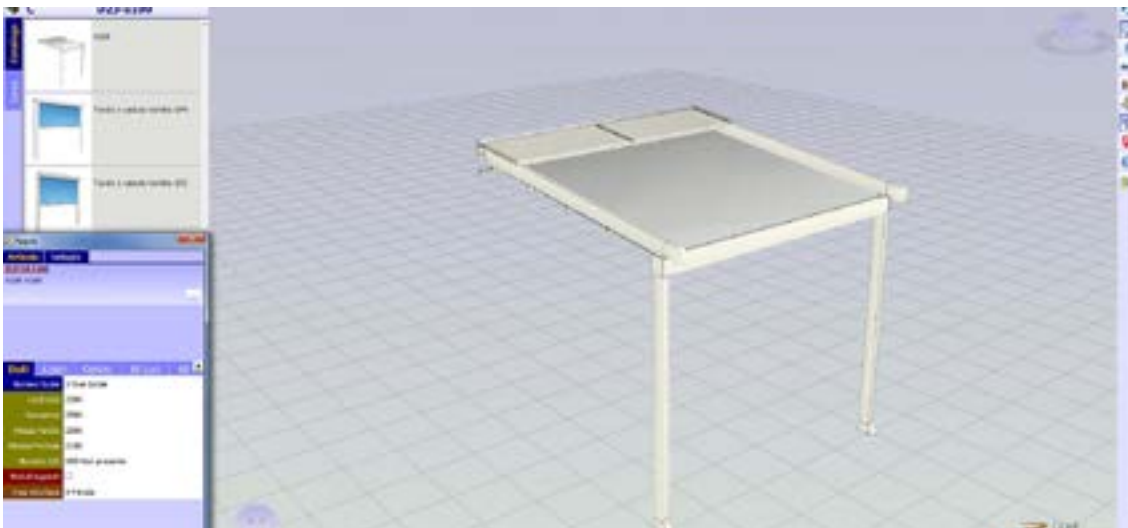
KE has adapted to the new ways of using the product by working on a digital showroom that is able to give the user a high-impact visual experience, a functional space where they can move around freely, receive detailed information on products with a simple click, and access content of interest quickly and intuitively. There is viewable content such as augmented reality and downloadable files such as data sheets, brochures and 3D models.



KE
ENJOY THE OUTDOORS



The KE B2B order system is a simple and intuitive service for placing orders conveniently online. An attractive graphic design, numerous functionalities and an easy and intuitive use mode that allows to access in real time to all the information related to the history of the orders and to the processing of the current ones. With the Cad Lite 3D Configurator you can configure Genius and Bioclimatica models thanks to a constantly updated online catalogue. Thanks to an easy-to-use interface, it also allows you to formulate a complete quote with minimal error.

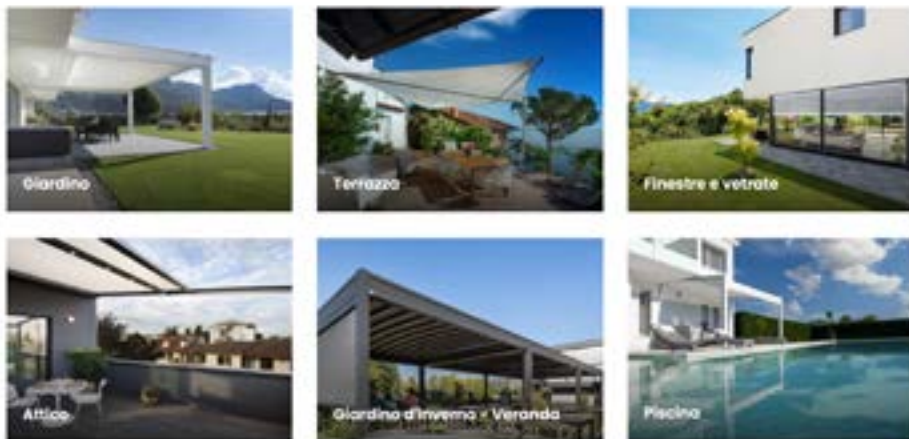




Home > Ambienti

Ambienti

La nostra missione è creare nuovi spazi outdoor da vivere in totale armonia. Grazie alle nostre coperture solari e alle strutture per esterni personalizzate, potrai arredare con stile il tuo terrazzo, giardino, attico, ma anche modulare. [Leggi di più](#)



BIM technology improves the working method of designers and is now the main source of information for the realisation of a project. With BIM the model is generated in a "parametric 3D" from which a series of information such as 2D views, elevations, sections but also metric calculations and much more can be automatically derived. On the KE website you can find the BIM gallery of the main KE models, the certifications and all the useful technical documentation for each product: www.keoutdoordesign.com





A GROUP, A VISION, A GROUP IN EVOLUTION

Since 1987, KE has been designing and manufacturing arm awnings, cassette awnings, drop awnings, canopies, shelters and is specialised in shading structures that enhance the liveability of outdoor spaces, up to the redesign and restyling of urban furniture. Both for the variety of the range and the depth of the configurations, KE is a manufacturing reality able to satisfy the most demanding requests the most demanding requirements of designers, architects, window and door manufacturers, upholsterers and outdoor professionals.



Improving the experience

With KE's professionalism and experience you can rely on quality products designed to enhance your customers' outdoor experience. With KE it will be easier to live the outdoor space in perfect harmony with the surrounding environment, widening the viewpoints and ensuring maximum comfort in all seasons. all seasons.